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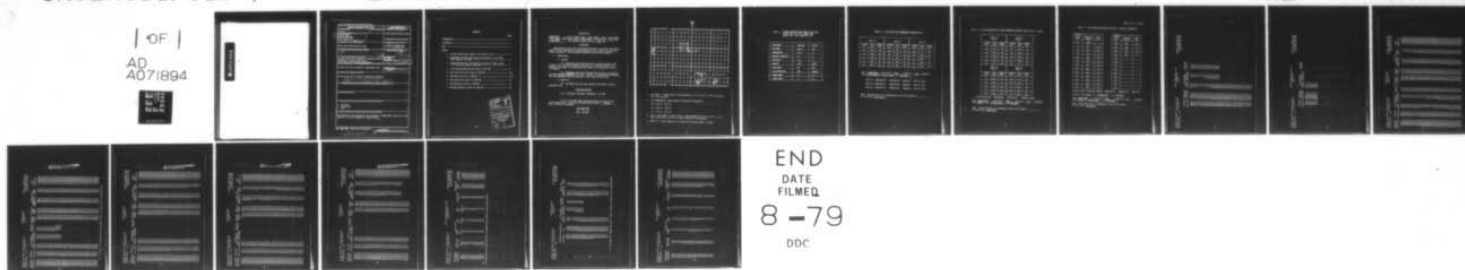
ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2  
19305A GSRS MISSILE NUMBER 1025, ROUND NUMBER V-33.(U)  
MAY 79

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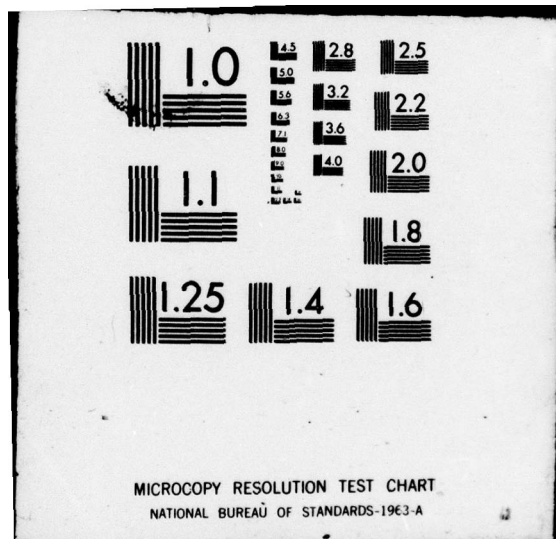
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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19305A GSRS, Missile No. 1025, Round No. V-33, are presented in tabular form.		

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# CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
MAP -----	2
TABLES	
1. Surface Observations Taken at 1611 MDT at LC-33 -----	3
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 1610 MDT -----	4
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, Taken at 1610 MDT -----	5
4. Pilot-Balloon-Measured Wind Data at 1611 MDT -----	6
5. SMR Significant Level Data at 1355 MST -----	7-8
6. SMR Upper Air Data at 1355 MST -----	9-13
7. MRN Significant Levels at 1355 MST -----	14
8. SMR Mandatory Levels at 1355 MST -----	15
9. SMR MRN Mandatory Levels at 1355 MST -----	16

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## INTRODUCTION

19305A GSRS, Missile Number 1025, Round Number V-33, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1610 MDT, 25 May 1979. The scheduled launch time was 1540 MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

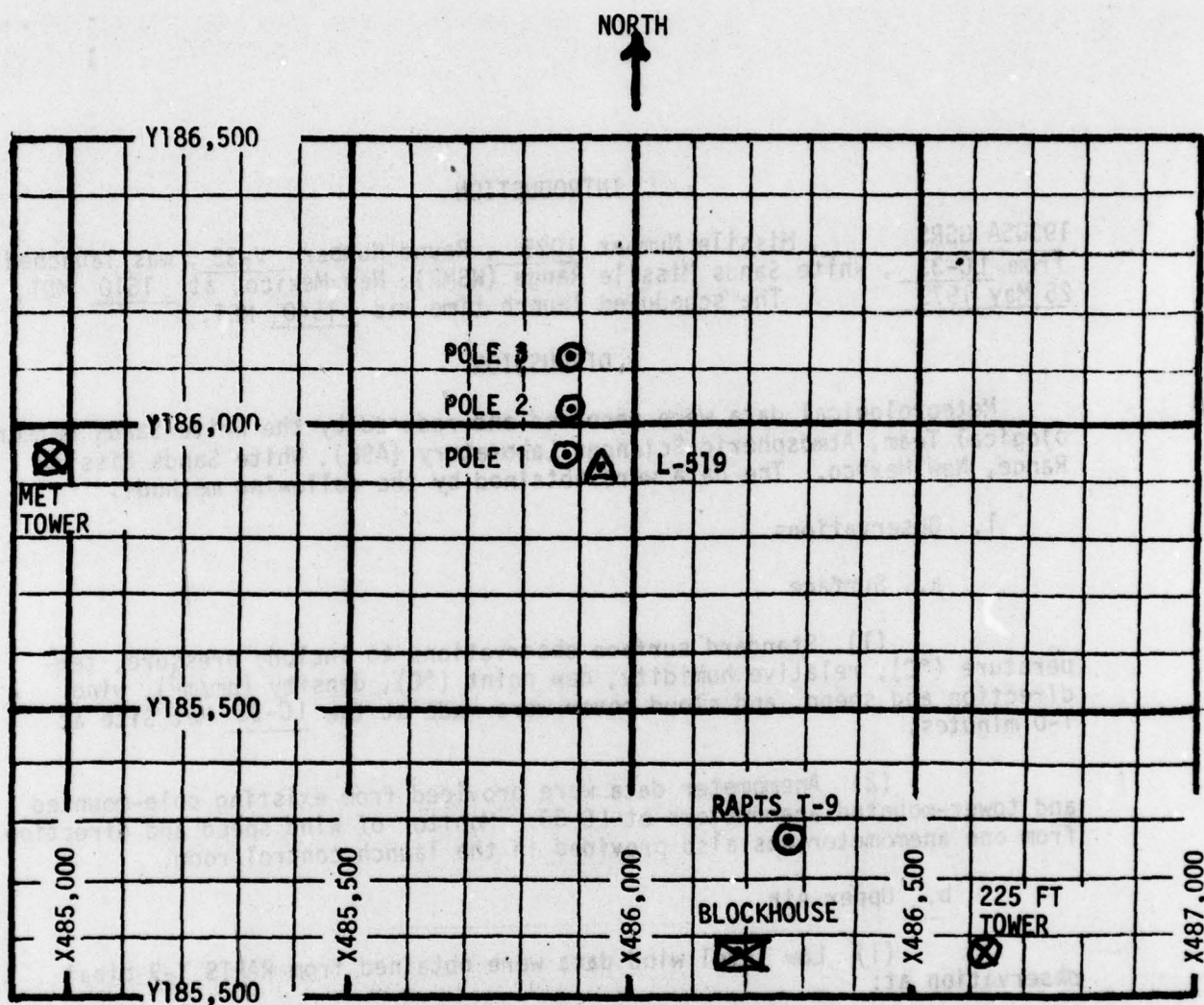
## SITE AND ALTITUDE

LC-33 480 meters (30-meter increments) 1611 MDT

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 100,500 feet in 500-foot increments.

## SITE AND TIME

SMR 1355 MST



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
  - (a) Pole #1 - 38.7 ft
  - (b) Pole #2 - 53.0 ft
  - (c) Pole #3 - 83.6 ft
3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 88 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.
4. RAPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar



TABLE 1. SURFACE OBSERVATIONS TAKEN AT 1611 MDT,  
25 MAY 1979 AT LC-33, 19305A GSRS,  
MISSILE NO. 1025, ROUND NO. V-33

ELEVATION	3977.30	FT/MSL
PRESSURE	880.0	MBS
TEMPERATURE	29.0	°C
RELATIVE HUMIDITY	41	%
DEW POINT	14.4	°C
DENSITY	1007	GM/M <sup>3</sup>
WIND SPEED	06	MPH
WIND DIRECTION	090	DEGREES
CLOUD COVER	3	Cu
CLOUD COVER	5	Cs

TABLE 2. LC-33 FIXED POLE ANEMOMETER-MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	000	00	-30	172	09	-30	M	09
-20	000	00	-20	169	08	-20	168	06
-10	000	00	-10	175	08	-10	180	04
0.0	000	00	0.0	158	09	0.0	180	06
+10	000	00	+10	156	09	+10	166	04

Type 19305A GSRS, Missile No. 1025, Round No. V-33 launched from LC-33 (Mobile) on 25 May 1979 at 1610 MDT.

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

NOTE: Wind directions are referenced to the firing azimuth \_\_\_\_\_ or true north true north.

TABLE 3. LC-33 METEOROLOGICAL TOWER ANEMOMETER-MEASURED WINDS (202 FT. TOWER)

LEVEL #1 12 ft.			LEVEL #2 62 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	141	08	-30	152	10
-20	153	08	-20	152	10
-10	145	09	-10	143	10
0.0	155	10	0.0	146	10
+10	144	09	+10	147	10
LEVEL #3 102 ft.			LEVEL #4 202 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	156	05	-30	141	10
-20	157	04	-20	137	10
-10	148	04	-10	142	09
0.0	152	04	0.0	137	09
+10	157	04	+10	130	08

WTSM Coordinates: X484,982.64 Y185,957.73 H3983.00 (base)

Type 19305A GSRS, Missile No. 1025, Round No. V-33 launched  
from LC-33 on 25 May 1979 at 1610 MDT.

NOTE: Wind directions are referenced to the firing azimuth \_\_\_\_\_  
or true north true north.



TABLE 4. PILOT-BALLOON-MEASURED WIND DATA (30-METER INCREMENTS)

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
SFC	Calm	
30	141	5.5
60	150	13.0
90	153	9.0
120	148	9.0
150	169	7.5
180	171	7.5
210	146	7.0
240	167	5.0
270	172	4.0
300	160	7.5
330	146	9.0
360	152	7.0

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
390	147	8.5
420	164	6.0
450	179	7.0
480	181	7.0
510		
540		
570		
600		
630		
660		
690		
720		
750		

Release Point Coordinates (WSTM): X486,037.24 Y486,037.24 H3977.30

Released from LC-33 on 25 May 1979 at 1611 MDT.Type 19305A GSRS, Missile No. 1025, Round No. V-33 launched from LC-33 on 25 May 1979 at 1610 MDT.NOTE: Wind directions are referenced to the firing azimuth or true north true north.



STATION ALTITUDE 3997.30 FEET MSL  
25 MAY 79  
ASCENSION NO. 150

SIGNIFICANT LEVEL DATA  
1450060150  
S M R

GEODETTIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
878.1 3997.3	25.0 8.1	34.0
850.0 4928.3	21.0 8.6	45.0
810.2 6282.5	16.9 7.6	55.0
770.2 7692.1	12.6 8.1	74.0
750.4 8046.0	12.0 7.3	52.0
721.8 9476.2	9.3 1.2	57.0
700.0 10309.6	7.1 1.4	67.0
684.2 10925.8	5.5 .9	72.0
665.4 11673.4	4.0 -4.4	54.0
636.6 12851.9	1.5 -1.4	81.0
583.4 15142.4	-4.0 -8.6	69.0
570.5 15722.4	-4.3 -20.4	27.0
549.2 16706.9	-5.0 -21.9	25.0
500.0 19106.4	-10.8 -21.4	41.0
429.8 22869.7	-19.5 -23.1	61.0
400.0 24614.9	-23.0 -31.1	47.0
379.8 25857.6	-25.8 -37.2	33.0
352.4 27630.6	-29.3 -45.0	20.0
326.2 29423.4	-34.3 -49.3	20.0
300.0 31335.9	-39.5	
260.2 34484.4	-48.1	
250.0 35349.5	-49.7	
222.4 37837.1	-55.8	
212.2 38818.0	-57.5	
207.2 39315.9	-56.0	
200.0 40057.3	-55.9	
183.4 41860.5	-59.2	
174.4 42901.5	-58.5	
161.4 44497.6	-61.0	
150.0 45998.2	-61.0	
137.0 47841.2	-64.3	
133.2 48411.5	-62.2	
125.8 49580.4	-60.7	
100.0 54273.3	-62.4	
87.0 57101.5	-63.7	
75.8 59912.9	-60.6	
70.0 61553.8	-59.4	
65.2 63017.9	-60.7	
60.0 64739.0	-57.5	
53.0 67318.4	-59.0	

STATION ALTITUDE 3997.30 FEET MSL  
 25 MAY 79  
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 1450060150  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
50.0 68532.4	-56.7	
39.0 73771.0	-54.0	
34.6 76338.1	-49.4	
30.0 79433.5	-48.9	
21.9 86317.2	-46.0	
20.0 88332.2	-42.3	
13.0 98048.2	-39.0	
11.6 100657.3	-35.5	

STATION ALTITUDE 3997.30 FEET MSL  
25 MAY 79  
ASCENSION NO. 150

UPPER AIR DATA  
1450060150  
S M R

GEODETTIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3997.3	878.1	25.0	8.1	34.0	1021.2	674.3	0	0	1.000274
4000.0	878.0	25.0	8.1	34.0	1021.2	674.2	151.8	0	1.000274
4500.0	862.8	22.8	8.5	39.9	1010.5	671.9	151.8	1.4	1.000273
5000.0	847.8	20.8	8.6	45.5	999.6	669.8	151.8	2.8	1.000272
5500.0	833.0	19.3	8.4	49.2	987.4	667.9	151.8	4.2	1.000269
6000.0	818.3	17.8	8.0	52.9	975.1	666.1	151.8	5.6	1.000266
6500.0	803.9	16.2	8.0	57.9	962.9	664.4	149.8	6.4	1.000263
7000.0	789.6	14.7	8.1	64.7	950.6	662.7	147.2	6.9	1.000261
7500.0	775.5	13.2	8.1	71.4	938.6	661.0	158.9	7.5	1.000259
8000.0	761.7	12.9	4.0	54.9	924.0	660.2	170.5	8.3	1.000244
8500.0	747.9	11.8	2.7	53.6	911.1	658.8	180.7	9.4	1.000238
9000.0	734.4	10.5	1.9	55.3	896.7	657.3	188.2	10.7	1.000233
9500.0	721.2	9.2	1.2	57.3	886.5	655.8	193.5	12.0	1.000229
10000.0	708.0	7.9	1.4	63.3	874.4	654.3	199.8	13.8	1.000227
10500.0	695.1	6.6	1.2	68.5	862.4	652.8	204.7	15.8	1.000225
11000.0	682.3	5.4	.4	70.2	850.5	651.3	205.3	16.5	1.000220
11500.0	669.7	4.3	-3.1	58.2	838.4	649.9	205.5	17.0	1.000211
12000.0	657.3	3.3	-3.4	61.5	826.0	648.6	201.5	15.5	1.000208
12500.0	645.1	2.2	-2.1	72.9	813.5	647.5	195.7	14.2	1.000207
13000.0	633.0	1.1	-1.9	80.2	801.4	646.2	185.6	13.6	1.000205
13500.0	621.1	-1.1	-3.5	77.6	790.0	644.7	177.1	13.7	1.000200
14000.0	609.4	-1.3	-5.1	75.0	778.7	643.2	171.8	14.2	1.000195
14500.0	597.9	-2.5	-6.7	72.4	767.6	641.7	173.1	14.0	1.000190
15000.0	586.6	-3.7	-8.4	69.7	756.7	640.2	178.1	13.6	1.000186
15500.0	575.4	-4.2	-14.8	43.1	744.3	639.3	187.3	14.3	1.000176
16000.0	564.4	-4.5	-20.9	26.4	731.3	638.8	194.5	15.5	1.000169
16500.0	553.6	-4.9	-21.6	25.4	718.3	638.4	199.8	17.1	1.000166
17000.0	542.9	-5.7	-21.7	27.0	706.7	637.3	200.7	17.2	1.000163
17500.0	532.4	-6.9	-21.4	30.3	696.1	635.9	201.2	17.0	1.000161
18000.0	522.1	-8.1	-21.3	33.6	685.7	634.5	201.2	16.6	1.000159
18500.0	512.0	-9.3	-21.3	37.0	675.5	633.0	202.9	16.6	1.000157
19000.0	502.1	-10.5	-21.4	40.3	665.5	631.8	205.8	16.9	1.000154
19500.0	492.2	-11.7	-21.7	43.1	655.2	630.2	206.0	16.4	1.000152
20000.0	482.4	-12.9	-22.1	45.7	645.1	628.8	205.1	15.8	1.000150
20500.0	472.8	-14.0	-22.5	48.4	635.1	627.4	202.0	15.7	1.000147
21000.0	463.4	-15.2	-23.0	51.1	625.2	626.0	201.2	15.8	1.000145
21500.0	454.1	-16.3	-23.5	53.7	615.5	624.6	203.7	16.0	1.000142
22000.0	445.1	-17.5	-24.0	56.4	606.0	623.1	209.0	16.2	1.000140
22500.0	436.2	-18.6	-24.6	59.0	596.7	621.7	215.7	16.5	1.000138
23000.0	427.5	-19.8	-25.5	60.0	587.3	620.3	220.2	17.1	1.000135



STATION ALTITUDE 3997.30 FEET MSL  
25 MAY 79 1355 HRS MST  
ASCENSION NO. 150

UPPER AIR DATA  
1450060150  
S M R

GEODETTIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	418.8	-20.8	55.9	577.7	619.1	224.0	17.8	1.000133
24000.0	410.3	-21.8	51.9	568.2	617.8	226.8	18.0	1.000130
24500.0	401.9	-22.8	47.9	558.9	616.6	230.1	18.2	1.000127
25000.0	393.6	-23.9	42.7	549.9	615.2	233.8	18.4	1.000125
25500.0	385.5	-25.0	37.0	541.0	613.8	229.5	19.7	1.000122
26000.0	377.5	-26.1	32.0	532.2	612.4	224.2	21.5	1.000120
26500.0	369.6	-27.1	28.3	523.2	611.2	220.4	23.6	1.000118
27000.0	361.9	-28.1	24.6	514.3	610.0	219.5	24.7	1.000115
27500.0	354.3	-29.0	21.0	505.6	608.7	221.1	24.9	1.000113
28000.0	346.9	-30.3	20.0	497.6	607.1	221.7	24.9	1.000111
28500.0	339.5	-31.7	20.0	489.8	605.4	221.6	24.8	1.000110
29000.0	332.3	-33.1	20.0	482.2	603.6	219.3	24.6	1.000108
29500.0	325.2	-34.5	19.2**	474.6	601.9	216.1	24.4	1.000106
30000.0	318.1	-35.9	14.0**	467.0	600.1	213.7	24.5	1.000104
30500.0	311.2	-37.2	8.8**	459.5	598.4	211.4	24.7	1.000102
31000.0	304.5	-38.6	3.5**	452.2	596.7	211.3	24.3	1.000101
31500.0	297.8	-39.9		444.8	594.9	211.0	23.8	1.000099
32000.0	291.1	-41.3		437.5	593.2	208.0	23.0	1.000097
32500.0	284.6	-42.7		430.2	591.4	205.2	22.5	1.000096
33000.0	278.3	-44.0		423.1	589.7	204.1	22.9	1.000094
33500.0	272.0	-45.4		416.1	587.9	203.2	23.4	1.000093
34000.0	266.0	-46.8		409.3	586.1	203.1	23.7	1.000091
34500.0	260.0	-48.1		402.5	584.4	202.0	23.9	1.000090
35000.0	254.1	-49.1		395.0	583.2	198.1	23.8	1.000088
35500.0	248.2	-50.1		387.6	581.9	193.4	23.9	1.000086
36000.0	242.5	-51.3		380.7	580.3	187.4	24.6	1.000085
36500.0	236.8	-52.5		374.0	578.7	184.1	25.2	1.000083
37000.0	231.3	-53.7		367.3	577.1	184.2	25.4	1.000082
37500.0	226.0	-55.0		360.8	575.4	187.8	25.2	1.000080
38000.0	220.7	-56.1		354.1	574.0	194.9	24.8	1.000079
38500.0	215.5	-56.9		347.2	572.6	200.0	24.9	1.000077
39000.0	210.4	-57.0		339.0	572.6	203.3	25.2	1.000075
39500.0	205.4	-56.0		329.5	574.1	205.4	25.9	1.000073
40000.0	200.5	-55.9		321.6	574.2	200.8	26.7	1.000072
40500.0	195.8	-56.7		315.1	573.1	209.4	28.2	1.000070
41000.0	191.1	-57.6		309.0	571.9	212.2	29.9	1.000069
41500.0	186.6	-58.5		302.9	570.7	216.2	30.9	1.000067
42000.0	182.2	-59.1		296.5	570.0	220.5	31.6	1.000066
42500.0	177.8	-58.8		289.0	570.4	225.8	34.3	1.000064
43000.0	173.6	-58.7		281.9	570.6	230.7	38.2	1.000063

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

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STATION ALTITUDE 997.30 FEET MSL  
25 MAY 79  
ASCENSION NO. 150

UPPER AIR LATA  
1450060150  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	169.4	-59.4			276.1	569.5	234.3	42.4	1.000061
44000.0	165.3	-60.2			270.5	568.5	236.9	46.6	1.000060
44500.0	161.4	-61.0			265.0	567.4	239.8	48.4	1.000059
45000.0	157.5	-61.0			258.6	567.4	243.9	46.5	1.000058
45500.0	153.7	-61.0			252.4	567.4	248.2	44.1	1.000056
46000.0	150.0	-61.0			246.3	567.4	252.4	39.7	1.000055
46500.0	146.3	-61.9			241.3	566.2	257.2	35.5	1.000054
47000.0	142.8	-62.8			236.5	565.0	255.8	30.9	1.000053
47500.0	139.3	-63.7			231.7	563.8	253.9	26.4	1.000052
48000.0	135.9	-63.7			226.1	563.8	249.8	24.3	1.000050
48500.0	132.6	-62.1			218.9	560.0	245.0	22.5	1.000049
49000.0	129.4	-61.4			213.0	560.8	248.2	19.1	1.000047
49500.0	126.3	-60.8			207.2	567.7	257.5	15.4	1.000046
50000.0	123.2	-60.9			202.2	567.0	266.3	12.9	1.000045
50500.0	120.3	-61.0			197.5	567.4	271.1	11.4	1.000044
51000.0	117.4	-61.2			192.9	567.1	272.1	10.3	1.000043
51500.0	114.5	-61.4			188.4	560.9	254.6	10.7	1.000042
52000.0	111.8	-61.6			184.0	560.7	239.8	11.9	1.000041
52500.0	109.1	-61.8			179.7	566.4	243.0	12.6	1.000040
53000.0	106.4	-61.9			175.5	560.2	247.1	13.3	1.000039
53500.0	103.9	-62.1			171.4	565.9	256.2	14.2	1.000038
54000.0	101.3	-62.3			167.4	565.7	267.4	15.6	1.000037
54500.0	98.9	-62.5			163.5	565.4	270.0	16.4	1.000036
55000.0	96.5	-62.7			159.7	565.1	283.7	14.7	1.000036
55500.0	94.1	-63.0			156.0	564.8	293.3	13.2	1.000035
56000.0	91.8	-63.2			152.4	564.5	300.3	11.5	1.000034
56500.0	89.6	-63.4			148.9	564.2	323.1	10.5	1.000033
57000.0	87.4	-63.7			145.4	563.9	332.4	10.4	1.000032
57500.0	85.3	-63.3			141.6	564.4	333.4	10.5	1.000032
58000.0	83.3	-62.7			137.8	565.1	333.5	10.5	1.000031
58500.0	81.2	-62.2			134.1	565.9	327.4	10.4	1.000030
59000.0	79.3	-61.6			130.5	560.0	321.2	10.4	1.000029
59500.0	77.3	-61.1			127.0	567.4	321.3	9.6	1.000028
60000.0	75.3	-60.5			123.7	560.1	323.9	8.4	1.000028
60500.0	73.7	-60.2			120.5	568.5	330.0	7.3	1.000027
61000.0	71.9	-59.8			117.4	569.0	322.0	6.6	1.000026
61500.0	70.2	-59.4			114.4	569.5	312.3	6.1	1.000025
62000.0	68.5	-59.8			111.8	569.0	302.1	6.2	1.000025
62500.0	66.9	-60.2			109.4	568.5	293.3	6.7	1.000024
63000.0	65.3	-60.7			107.0	567.9	287.1	7.3	1.000024

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STATION ALTITUDE 3997.30 FEET MSL  
25 MAY 79 1355 HRS MST  
ASCENSION NO. 150

UPPER AIR DATA  
1450060150  
S M R

GEODEIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	63.7	-59.8		104.0	569.0	297.0	6.6	1.000023
64000.0	62.2	-58.9		101.1	570.3	308.9	6.1	1.000023
64500.0	60.7	-57.9		99.3	571.5	320.7	6.6	1.000022
65000.0	59.3	-57.7		95.8	571.9	329.0	7.9	1.000021
65500.0	57.8	-57.9		93.6	571.5	334.7	9.3	1.000021
66000.0	56.5	-58.2		91.5	571.1	350.7	8.2	1.000020
66500.0	55.1	-58.5		89.5	570.7	21.4	8.6	1.000020
67000.0	53.8	-58.8		87.5	570.4	41.0	9.5	1.000019
67500.0	52.5	-58.7		85.3	570.6	57.7	10.0	1.000019
68000.0	51.3	-57.7		82.9	571.8	71.8	11.3	1.000018
68500.0	50.1	-56.8		80.6	573.1	79.9	9.7	1.000018
69000.0	48.9	-56.5		78.6	573.5	90.9	7.2	1.000018
69500.0	47.8	-56.2		76.7	573.8	110.0	5.4	1.000017
70000.0	46.6	-55.9		74.8	574.2	114.1	6.6	1.000017
70500.0	45.5	-55.7		73.0	574.5	117.0	7.8	1.000016
71000.0	44.5	-55.4		71.2	574.8	116.7	8.5	1.000016
71500.0	43.4	-55.2		69.4	575.2	113.3	8.6	1.000015
72000.0	42.4	-54.9		67.7	575.5	110.0	8.7	1.000015
72500.0	41.4	-54.7		66.0	575.9	99.0	8.6	1.000015
73000.0	40.5	-54.4		64.4	576.2	86.3	8.8	1.000014
73500.0	39.5	-54.1		62.8	576.5	76.2	9.3	1.000014
74000.0	38.6	-53.6		61.2	577.3	73.4	9.9	1.000014
74500.0	37.7	-52.7		59.6	578.4	71.0	10.6	1.000013
75000.0	36.8	-51.8		58.0	579.6	65.0	12.5	1.000013
75500.0	36.0	-50.9		56.4	580.8	58.6	15.9	1.000013
76000.0	35.1	-50.0		54.9	582.0	54.4	19.3	1.000012
76500.0	34.3	-49.4		53.5	582.8	54.1	20.3	1.000012
77000.0	33.6	-49.3		52.2	582.9	54.2	20.8	1.000012
77500.0	32.8	-49.2		51.0	583.0	54.4	21.3	1.000011
78000.0	32.0	-49.1		49.8	583.1	57.5	18.0	1.000011
78500.0	31.3	-49.1		48.7	583.2	62.1	14.7	1.000011
79000.0	30.6	-49.0		47.6	583.3	69.2	11.7	1.000011
79500.0	29.9	-48.9		46.5	583.4	76.0	11.9	1.000010
80000.0	29.2	-48.7		45.4	583.7	82.6	12.2	1.000010
80500.0	28.6	-48.5		44.3	584.0	88.3	12.7	1.000010
81000.0	27.9	-48.2		43.3	584.3	90.4	13.2	1.000010
81500.0	27.3	-48.0		42.2	584.5	92.3	13.8	1.000009
82000.0	26.7	-47.8		41.2	584.8	93.7	14.3	1.000009
82500.0	26.1	-47.6		40.3	585.1	92.4	14.7	1.000009
83000.0	25.5	-47.4		39.3	585.3	91.2	15.1	1.000009

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STATION ALTITUDE 3997.30 FEET MSL  
25 MAY 79 1355 HRS MST  
ASCENSION NO. 150

UPPER AIR DATA  
1450060150  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
83500.0	24.9	-47.2		38.4	565.9	91.1	15.3	1.000009
84000.0	24.5	-47.0		37.5	565.9	94.6	15.0	1.000008
84500.0	23.8	-46.8		36.6	565.2	94.2	14.7	1.000008
85000.0	23.5	-46.6		35.8	565.4	101.6	14.3	1.000008
85500.0	22.7	-46.3		34.9	566.7	104.1	13.3	1.000008
86000.0	22.2	-46.1		34.1	567.0	107.0	12.3	1.000008
86500.0	21.7	-45.7		33.5	567.6	110.4	11.4	1.000007
87000.0	21.2	-44.7		32.4	568.8	117.8	11.1	1.000007
87500.0	20.8	-43.8		31.5	590.0	125.5	11.1	1.000007
88000.0	20.5	-42.9		30.7	591.1	133.0	11.3	1.000007
88500.0	19.9	-42.2		29.9	592.0	138.3	11.1	1.000007
89000.0	19.4	-42.1		29.5	592.2	142.9	10.7	1.000007
89500.0	19.0	-41.9		28.6	592.4	147.8	10.4	1.000006
90000.0	18.6	-41.7		28.0	592.6	149.6	10.0	1.000006
90500.0	18.2	-41.6		27.3	592.9	145.5	9.3	1.000006
91000.0	17.8	-41.4		26.7	593.1	138.5	8.7	1.000006
91500.0	17.4	-41.2		26.1	593.3	128.7	8.3	1.000006
92000.0	17.0	-41.1		25.5	593.5	115.7	8.4	1.000006
92500.0	16.6	-40.9		24.9	593.7	103.6	9.0	1.000006
93000.0	16.3	-40.7		24.4	593.9	93.3	9.9	1.000005
93500.0	15.9	-40.5		23.6	594.2	90.0	10.0	1.000005
94000.0	15.6	-40.4		23.3	594.4	90.6	9.4	1.000005
94500.0	15.2	-40.2		22.8	594.6	91.6	8.8	1.000005
95000.0	14.9	-40.0		22.2	594.8	93.2	8.6	1.000005
95500.0	14.6	-39.9		21.7	595.0	96.6	9.5	1.000005
96000.0	14.2	-39.7		21.2	595.2	99.4	10.4	1.000005
96500.0	13.9	-39.5		20.8	595.5	101.7	11.4	1.000005
97000.0	13.6	-39.4		20.3	595.7	98.6	12.5	1.000005
97500.0	13.5	-39.2		19.8	595.9	91.1	13.7	1.000004
98000.0	13.0	-39.0		19.4	596.1	88.7	15.1	1.000004
98500.0	12.7	-38.4		18.9	596.9			1.000004
99000.0	12.5	-37.7		18.5	597.8			1.000004
99500.0	12.2	-37.1		18.0	598.0			1.000004
100000.0	11.9	-36.4		17.6	599.5			1.000004
100500.0	11.7	-35.7		17.1	600.3			1.000004

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STATION ALTITUDE 3997.30 FEET MSL  
25 MAY 79 1355 HRS MST  
ASCENSION NO. 150

MRN SIGNIFICANT LEVEL DATA  
1450060150  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA	N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
3052.	9999.**	9999.**	9999.**	-9999.**	-9999.**	99	-35.5	1.160+1
2973.	86.	8.	8.	-1.	-6.	99	-39.0	1.300+1
2680.	137.	6.	6.	4.	-4.	99	-42.3	2.000+1
2619.	109.	6.	6.	2.	-6.	99	-46.0	2.190+1
2411.	75.	6.	6.	-2.	-6.	99	-48.9	3.000+1
2317.	54.	10.	10.	-6.	-6.	99	-49.4	3.460+1
2240.	75.	5.	5.	-1.	-5.	99	-54.0	3.900+1
2081.	80.	5.	5.	-1.	-5.	99	-56.7	5.060+1
2044.	52.	5.	5.	-3.	-4.	99	-59.0	5.300+1
1966.	325.	4.	4.	-3.	2.	99	-57.5	6.000+1
1914.	287.	4.	4.	-1.	4.	99	-60.7	6.520+1
1870.	311.	3.	3.	-2.	2.	99	-59.4	7.000+1
1820.	325.	4.	4.	-4.	3.	99	-60.6	7.580+1
1735.	333.	5.	5.	-5.	2.	99	-63.7	8.700+1
1649.	273.	9.	9.	-0.	9.	99	-62.4	1.000+2

\*\* WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3997.30 FEET MSL  
 25 MAY 79 1355 HRS MST  
 ASCENSION NO. 150

MANDATORY LEVELS  
 1450060150  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4925.	21.0	8.6	45.	151.8	2.6
800.0	6632.	15.8	8.0	60.	149.1	6.6
750.0	8418.	11.9	2.8	53.	179.3	9.2
700.0	10299.	7.1	1.4	67.	202.9	15.0
650.0	12285.	2.7	-2.6	68.	198.8	14.7
600.0	14394.	-2.2	-6.4	73.	172.3	14.1
550.0	16648.	-5.0	-21.9	25.	200.4	17.3
500.0	19090.	-10.8	-21.4	41.	206.4	16.9
450.0	21707.	-16.9	-23.7	55.	205.3	16.1
400.0	24574.	-23.0	-31.1	47.	230.8	18.2
350.0	27741.	-29.7	-45.4	20.	221.7	24.9
300.0	31274.	-39.5			211.3	24.0
250.0	35272.	-49.7			195.5	23.8
200.0	39961.	-55.9			206.9	26.8
175.0	42722.	-58.5			229.0	36.7
150.0	45874.	-61.0			252.2	39.9
125.0	49569.	-60.7			262.2	14.1
100.0	54106.	-62.4			272.1	16.5
80.0	58614.	-61.8			324.0	10.4
70.0	61342.	-59.4			311.8	6.1
60.0	64307.	-57.5			324.5	7.1
50.0	68274.	-56.7			79.8	9.7
40.0	72942.	-54.3			81.5	9.0
30.0	79093.	-48.9			74.0	11.8
25.0	83037.	-47.2			90.4	15.4
20.0	87916.	-42.3			136.4	11.3
15.0	94329.	-40.1			92.1	6.5

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL  
 25 MAY 79 1355 HRS MST  
 ASCENSION NO. 130

MRN MANDATORY LEVELS  
 1450060150  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECA METERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA		DEW PT D <sub>EP</sub> DEG C	TEMPERATURE		PRESSURE MILLIBARS
			N-S MPS	E-W MPS		AIR DEG C		
2675.	92.	4.	0.	-4.	99	-40.1	1.500+1	
2680.	136.	6.	4.	-4.	99	-42.3	2.000+1	
2531.	90.	8.	0.	-8.	99	-47.2	2.500+1	
2411.	75.	6.	-2.	-6.	99	-48.9	3.000+1	
2223.	81.	5.	-1.	-5.	99	-54.3	4.000+1	
2081.	80.	5.	-1.	-5.	99	-56.7	5.000+1	
1968.	324.	4.	-3.	2.	99	-57.5	6.000+1	
1870.	312.	3.	-2.	2.	99	-59.4	7.000+1	
1787.	324.	5.	-4.	3.	99	-61.8	8.000+1	
1649.	272.	8.	-0.	8.	99	-62.4	1.000+2	
1511.	262.	7.	1.	7.	99	-60.7	1.250+2	
1398.	252.	21.	6.	20.	99	-61.0	1.500+2	
1302.	229.	19.	12.	14.	99	-58.5	1.750+2	
1218.	207.	14.	12.	6.	99	-55.9	2.000+2	
1075.	195.	12.	12.	3.	99	-49.7	2.500+2	
953.	211.	12.	11.	8.	99	-39.5	3.000+2	
846.	222.	13.	10.	9.	16	-29.7	3.500+2	
749.	231.	9.	6.	7.	08	-23.0	4.000+2	
662.	205.	8.	7.	4.	07	-16.9	4.500+2	
582.	206.	9.	8.	4.	11	-10.8	5.000+2	
507.	206.	9.	8.	3.	17	-5.0	5.500+2	
439.	172.	7.	7.	-1.	04	-2.2	6.000+2	
374.	199.	8.	7.	2.	05	2.7	6.500+2	
314.	203.	8.	7.	3.	06	7.1	7.000+2	
257.	179.	5.	5.	-0.	09	11.9	7.500+2	
202.	149.	3.	3.	-2.	08	15.8	8.000+2	
150.	152.	1.	1.	-1.	12	21.0	8.500+2	

16